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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,283	08/22/2006	Akihiro Sukuzi	TIP 049	8072

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EXAMINER	
SCHIFFMAN, BENJAMIN A	
ART UNIT	PAPER NUMBER
1791	

NOTIFICATION DATE	DELIVERY MODE
09/17/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

garycohn@seattlepatent.com

Office Action Summary	Application No.	Applicant(s)	
	10/590,283	SUKUZI, AKIHIRO	
	Examiner	Art Unit	
	BENJAMIN SCHIFFMAN	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 August 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) *11-22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☒ Claim(s) *9 AND 10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *22 August 2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of group I, claims 1-10, in the reply filed on 28 August 2009 is acknowledged.

2. Claims 11-23 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention(s), there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 28 August 2009.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

4. The following title is suggested: METHOD OF MANUFACTURING A DRAWN BIODEGRADABLE MICRO-FILAMENT.

Claim Objections

5. Claims 9 and 10 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Specifically claims 9 and 10 require a drawn biodegradable filament according to claim 1, however claim 1 gives a method of manufacturing a filament and not the filament itself. Thus, the claim is read as a product by the process of claim 1 which is further used in a method. The preamble should be rewritten. For example a proper dependent preamble for claim

9 would be "A method for manufacturing drawn biodegradable filament according to claim 1, wherein..."

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Specifically in claim 1, the limitation "drawing… *according to* heating with an infrared beam" is unclear. *According to* is a prepositional phrase meaning: as stated or indicated by; on the authority of: *according to* historians; in keeping with: *according to* instructions; or as determined by: a list arranged *according to* the alphabet. However *according to* does not indicate a step of heating. For the purpose of compact prosecution the phrase “drawing… *according to* heating with an infrared beam" is interpreted to mean that the “heating with an infrared beam” allows the filament to be drawn with the tension. A limitation reading “drawing… *while* heating with an infrared beam" would be more clear.

9. In claim 3, the limitation “said *infrared beam* is heated” is unclear. For the purpose of compact prosecution the limitation is interpreted to mean “said *filament* is heated by said *infrared beam*”.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1-9 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2 and 6-8 of U.S. Patent No. 7,101,504. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following. '504 claims a method of manufacturing drawn filaments which comprises heating original filaments supplied from a filament supply means by infrared beams, drawing the filaments to 1000 times or more under a tension provided by the own weight of the filaments, or under a tension of 1 MPa or less. The filaments are heated within a range of 8 mm, i.e. within 4 mm of an axial up and down direction. The filaments are further heated and drawn in a heating and drawing zone. The filaments are accumulated on a running conveyor. Although '504 does not explicitly claim that multiple filaments are heated simultaneously, one of ordinary skill in the art

would recognize that this is a mere duplication of parts. Further one of skill in the art would recognize that the if the filaments were collected on a moving conveyor they would necessarily by drawn by there own weight at start up and the further drawing force would come from the moving conveyor **(see clm. 1, 2 and 6-8)**.

Claim Rejections - 35 USC § 102/103

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claim 1, 2 and 8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Suzuki et al. (JP 2003-16615 A).

16. Regarding claim 1, Suzuki discloses a method for manufacturing drawn filament, comprising the steps of drawing an original filament to a draw ratio of 1000 times or more by tension of 1 MPa or less per single filament while to heating with an infrared beam **(see abstract and para. 11)**.

17. Suzuki teaches that the process can be applied to natural fibers, such as silk, which are inherently biodegradable **(see para. 15)**.

18. Alternatively, at the time of invention, it would have been *prima facie* obvious to one of ordinary skill in the art to modify the method of Suzuki to include biodegradable filaments, because the specific type of filament is an intended use of the final filament, and a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Further, a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

19. Regarding claim 2, Suzuki discloses that the filaments own weight applies the tension **(see para. 14)**.

20. Regarding claim 8, Suzuki discloses that multiple filaments are drawn simultaneously in the same beam.**(see para. 90)**.

21. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (JP 2003-16615 A) as applied to claim 1 above, further in view of Ohkoshi et al. (US 6,497,952 B1).

22. Suzuki discloses that the beam diameter is 4.3 mm **(see para. 41)**, which when aimed at a fiber would be within a maximum of 2.15 mm, i.e. the radius, in an up and down axial direction from the center of the filament, which overlaps the claimed range **(see MPEP 2144.05)**

23. Suzuki does not does not appear to expressly disclose a plurality of beams.

24. However, Ohkoshi discloses a method of applying a infrared beam to a fiber in order to heat and draw the fiber, where the beam is directed through a lens to control the length of irradiated fiber, between 0.1 and 100 mm **(see col. 5 l. 42-48)**, and that the beam is reflected back at the fiber, i.e. a plurality of beams, **(see col. 7 l. 43-50)**.

25. At the time of invention, it would have been *prima facie* obvious to one of ordinary skill in the art to modify the method of Suzuki to include the beam control of Ohkoshi, in order to control the size of the irradiated region of the thread and control the temperature of the thread during drawing. Additionally one of ordinary skill in the art would be motivated to optimize the size and number of beam in depending on known process variables, such as throughput, fiber composition, and beam power.

26. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (JP 2003-16615 A) as applied to claim 1 above above, further in view of Davis et al (US 4,101,525).

27. Suzuki does not appear to expressly disclose further heating and drawing the drawn filament in heating and drawing zones.

28. However, Davis discloses a method of drawing a filament **(see abstract)** wherein the drawn filament is subjected heating and drawing in zones **(see col. 15 l. 22 to col. 16 l. 6)**.

29. At the time of invention, it would have been *prima facie* obvious to one of ordinary skill in the art to modify the method of Suzuki to include further drawing and heating of Davis, in order to improve the properties of the final filament **(see col. 13 l. 61 to col. 14 l. 52)**.

30. Claim 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (JP 2003-16615 A) as applied to claim 1 above, further in view of Tanaka et al. (US 5,506,041).

31. Regarding claim 9, Suzuki does not appear to expressly disclose collecting the filaments on a running conveyor.

32. However, Tanaka discloses a method of forming biodegradable filaments **(see abstract)** that are collected onto a conveyor **(see col. 9 l. 46-68)**.

33. At the time of invention, it would have been *prima facie* obvious to one of ordinary skill in the art to modify the method of Suzuki to include collecting the filaments

on a conveyor of Tanaka because, fibers are commonly collected on conveyors in order to form non-woven fabrics as is well known in the art.

34. Regarding claim 10, Suzuki discloses that the process is a initially a startup process where the fibers are tensioned by there own weight, or a fall block **(see para. 14)**, and the fibers are continuously drawn with tension applied by a moving spool, analogous to a conveyor **(see para. 82-84)**.

Conclusion

35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN SCHIFFMAN whose telephone number is (571)270-7626. The examiner can normally be reached on Monday through Thursday from 9AM until 4PM.

36. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHRISTINA JOHNSON can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

37. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BENJAMIN SCHIFFMAN/
Examiner, Art Unit 1791

/Matthew J. Daniels/
Primary Examiner, Art Unit 1791
9/14/09